IGCSE Assessment for learning: science skills checklist (calculation version)

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| Name: | Date: |

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| Design | Aim of investigation or research question is unclear. | There is a research question but dependent and independent variable have not been clearly defined. | A research question that has the dependent and independent variable clearly defined. |
| Only one control variable has been identified. | Most important control variables have been identified. | All important control variables have been identified. |
| Little detail in method in terms of amounts/sizes or how control variables will be measured. | The method includes some amounts and some of the variables are controlled. | The method is a numbered list of detailed steps that control all variables. |
| No clear instructions in method on how, when and how often the dependent variable will be measured or is only measured once. | Clear instructions but the independent variable is changed less than 4 times. | The independent variable is changed at least 4 times. |
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| Data collection and processing | Some data is collected, not all relevant, and is not recorded in a table. There is inconsistency in number of decimals in data. | Some relevant raw data is missing and/or table does not have any of the following: title, column headings and units in headings. There is inconsistency in number of decimals in data. | All data collected is relevant and is recorded in an appropriate results table with title, column headings and units in headings. There is consistency in number of decimal places in data. |
| Some errors in the calculation. | One error in calculations and/or final result is not in correct unit. | All calculations are correct and final result in correct unit. |
| Limited organization in calculations, working is not shown. | Calculations can be followed; some working is shown, not all units canceled. | Calculations are very easy to follow; all working is shown and units canceled. |
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| Conclusion and evaluation | No clear conclusion: no value of processed data or does not refer to any variables or just describes an obvious relationship. | There is a general statement about the relationship between the variables. | A clear conclusion consistent with data collected and which answers the research question or aim of investigation. |
| Identifies some irrelevant experimental error(s). | Identifies at one relevant experimental error. | Identifies at least two relevant experimental errors. |
| Suggests some unrealistic improvement. | Suggests at least one appropriate improvement linked to the experimental errors. | Suggests at least two appropriate improvements linked to the experimental errors. |

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| D | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |  |  |  |  |  |  |  |  |
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| Total | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 3 | 5 | 8 | 10 | 13 | 15 | 18 | 20 | 23 | 25 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 28 | 30 | 33 | 35 | 38 | 40 | 43 | 45 | 48 | 50 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 53 | 55 | 58 | 60 | 63 | 65 | 68 | 70 | 73 | 75 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 78 | 80 | 83 | 85 | 88 | 90 | 93 | 95 | 98 | 100 |

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| My mark: | Peer mark: | Teacher mark: |